Conrad V. Morton, 1905–1972.—Conrad V. Morton, a native Californian and senior botanist at the Smithsonian Institution, died July 29, 1972, in Washington, D.C., at the age of 67. Morton was born in Fresno and received his bachelor's degree from the University of California, Berkeley, where he was closely associated with W. L. Jepson. Mr. Morton joined the Smithsonian staff in 1928 and in 1948 became curator of the Division of Ferns, a position that he held at the time of his death. Perhaps best known for his studies of ferns and fern allies, Morton was also an authority on the Solanaceae and Gesneriaceae, and had a remarkably wide knowledge of vascular plants in general. Though he spent most of his professional life on the East coast, Morton maintained close ties with the botanical community on the Pacific coast. In memory of Mr. Morton, the staff and associates of the Department of Botany at the Smithsonian Institution have presented a cash gift to the California Botanical Society.

REVIEWS

The Biology and Chemistry of the Umbelliferae. By V. H. Heywood, Ed. x +438 pp., illustrated. Supplement 1 to the Botanical Journal of the Linnean Society, Volume 64. Published for the Linnean Society of London by Academic Press, England. 1971. $20.40.

EVERYTHING YOU EVER WANTED TO KNOW ABOUT THE UMBELLIFERAE? Twenty-two papers, presented as part of an international symposium on the Biology and Chemistry of the Umbelliferae held at the University of Reading, England in 1970, make up the text of this volume. Most of the contributors (6) are from the U.S.A. (Bell, Constance, Fairbrothers, French, Mathias, and Theobald) but in spite of this slant, there is good representation from Europe (Germany 3, France 3, England 3, among others) and one contributor each from Costa Rica and New Zealand. All of the papers are in English except, unfortunately, the several apparently excellent presentations from French workers. It would have been better judgement to publish *all* the texts in English, which is rapidly becoming the international language for Science. Certainly if all the contributors had made their presentations and published in their native language there would have been little intercommunication and much overlap, both at the symposium and in the text itself.

Constance sets the low key approach to the subject by his observation that even ". . . after three and a quarter centuries of successive and multinational effort, considerable disagreement still exists as to the proper delimitation of the family and even more uncertainty prevails as to its natural subdivisions and the criteria on which they should be erected". Even Heywood is humble reckoning as how his (and Dakshini's) scanning electron microscope ". . . study of the mericarps of Caucalidae is far from complete". And Moore (also from Reading) follows suit, stating (about chromosome studies), "—umbelliferous cytotaxonomy is still at the 'alpha' level". And Harborne (Reading too!) allows that ". . . our knowledge of the distribution and structure of these constituents [flavonoids] is still very superficial at the family level". And, further, "It is also too early to claim that knowledge of the flavonoids has contributed significantly to taxonomic revisions."

Only Hegnauer (except perhaps somewhere among those damnable papers in French), using chemical data, speaks with conviction suggesting, "Umbellales are not a climax group but may represent the stock from which Asterales evolved." A view also espoused by Bohlmann, using acetylenic compounds as taxonomic criteria.

In summary: It is evident on reading these papers that despite all this impressive body of research on the Umbelliferae, a vast amount of new information and reappraisal is needed before a systematic account of the family can be attempted. At least this reviewer can say that a hopeful beginning has been made. (Lest the reader think this summary somewhat unenthusiastic I wish to remark that, except for the words, "this reviewer", it is taken in full as the second from last paragraph of Heywood's introduction to this volume.)–B. L. Turner, Department of Botany, University of Texas, Austin 78712.